$$f * k \ (x) = \sum_{J} f(x-J) \, \underline{K(J)}.$$

$$h_{out} = \left\lfloor \frac{(h_{in} - k + 2p)}{S} \right\rfloor + 1$$

S - stride . (шаг).
P - padding.

I

$$\begin{pmatrix} \boxed{X_{11}} & X_{12} & X_{13} \\ X_{21} & X_{22} & X_{23} \\ X_{31} & X_{32} & X_{33} \end{pmatrix} * \begin{pmatrix} \boxed{K_{11}} & K_{12} \\ K_{21} & K_{22} \end{pmatrix} = $$

R'

$$\begin{pmatrix} K_{11} & K_{12} & 0 & K_{21} & K_{22} & 0 \dots & 0 \\ 0 & K_{11} & K_{12} & 0 & K_{21} & K_{22} & 0 \dots \end{pmatrix} \begin{pmatrix} X_{11} \\ X_{12} \\ X_{13} \\ X_{21} \\ \vdots \\ \vdots \\ K_{33} \end{pmatrix}$$

I